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Feminist Geographies of Digital Work

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Abstract

Feminist thought challenges essentialist and normative categorisations of 'work'. Therefore feminism provides a critical lens on 'working space' as a theoretical and empirical focus for digital geographies. Digital technologies extend and intensify working activity, rendering the boundaries of the workplace emergent. Such emergence heightens the ambivalence of working experience: the possibilities for affirmation and/or negation through work. A digital geography is put forward through feminist theorisations of the ambivalence of intimacy. The emergent properties of working with digital technologies create space through the intimacies of postwork places where bodies and machines feel the possibilities of being 'at' work.

Key Words: Feminist theory; work; digital geographies; intimacy; economy

I Introduction

The digital has been a focus for enquiry in geography from a variety of perspectives. Scholarship has considered interactions between software and space including GIS and spatial knowledge; digital divides and development; code/spaces; robots; big data and forms of governance (Del Casino Jnr 2015; Graham 2011; Kitchin and Dodge 2011; Kitchin 2013; 2014a; Kleine 2013; Wilson 2014). The differentiated materialities of digital technologies and their relationship with lived experience have also been addressed (Ash 2013; Kinsley 2014; Kirsch 2014; Leszczynski 2014; Rose 2015; Wilson 2011; 2012). This article contributes to these cultural perspectives by building on feminist geographical analyses of the digital (e.g. Elwood and Leszczynski 2011; Kwan 2002; 2007; Leszczynski and Elwood 2015) as a means through which geographers can 'more assertively' contribute to debates on 'the digital economy' (Kinsley 2014: 378). From the (limited) perspective of the 'Global North'ⁱ, I contend feminist critique provides an important analytical lens for understanding the role of digital technologies in geographies of work. These technologies enact an *extension* of the activities that count as work, together with an *intensification* of working practices, rendering the boundaries of the workplace *emergent*. In addition to making digital products, digital work is understood to include broader practices that extend and intensify working activities through digital technologies; spatial processes that should be of significant interest to geographers. Such (technological) changes to work are *ambivalent*: they provide opportunities for *affirmation*

and *negation* (as long noted, e.g. Beck 2000; Hardt 1999; Negri 1989; Sennett 1998). Affirmatively, work offers a basis for utopian demands and might be experienced as creative fulfilment. Negatively, work reduction underpins claims for work/life balance, particularly when excessive work is experienced as exploitation. Therefore my aim is not to delimit 'the digital', claiming it marks a 'phase shift' in understandings of technology and work.

Neither is it to suggest that feminist critique is the only way to approach such work. Rather I demonstrate the richness and complexity of feminist thoughtⁱⁱ for critical perspectives on the emergent properties of work with and through digital technologies. Feminist critiques of work have been articulated through such extensions and intensifications of working activity. A motivating feminist issue has been the emergence of different working experiences beyond *and* within what counts as 'work' (Cameron and Gibson-Graham 2003). Therefore, much feminist critique has operated by challenging the spatio-temporal boundaries of work, for example through extending work to include 'social reproduction', as well as by highlighting the ways working activity is intensified through forms of 'emotional labour' (Hochschild 1983; McDowell 1991; Pratt 2004). In questioning what counts as work by foregrounding different and differentiated working practices, feminists have shown how the 'workplace' is ambivalent; it might be a space for affirmation *and* for negation. The 'home' has served as a paradigmatic site in which working experience can be both affirming, for example through the pleasures derived from various labours of love, but also negating because such work is unremunerated and therefore potentially exploitative (Boris and Parreñas 2010; Pratt 2012). Thus feminist demands have both sought affirmative recognition of the category of 'Women's work' but have also shown how the differentiated nature of work negates any straightforward categorisation. Therefore, feminist critique offers a way of considering the ambivalent emergence of digital work. Feminist approaches aid understanding of how the emergent properties of the digital workplace might result in a fulfilling and inclusive experience but also an exploitative and isolating one. Specifically, *intimacy* is put forward as a frame for a geography of the digital that develops through work's ambivalence.

Feminist approaches to intimacy emphasise its ambivalent potential to be productive and destructive, corresponding to the possibilities for digital work to be fulfilling yet exploitative (Pratt and Rosner 2012). Intimacy occurs through a contradictory spatial sense as private

and proximate, public and distant (Berlant 1998). Thus I argue for a geography of the digital in the extensive and intensive emergence of working space through intimacy. To know the digital workplace through intimacy is to attune to the ambiguity of its actualisation where the establishment, displacement or transcendence of working limits occur through what it feels like to be doing work. By emphasising how knowledge unfolds through experience, an intimate geography of the digital combines theory and practice to put knowing 'working space' together with changing 'the workplace'. The article first substantiates the claim that the geographies of digital work are ambivalent. It shows how digital technologies result in extensions and intensifications of work that hold possibilities for working affirmation and negation. Second it considers how the direction of feminist critique follows two 'moves' that are articulated through such ambivalences of work extension and intensification. The 'anti-essentialist' move challenges singular locations of work through forms of extension, whilst the 'anti-normative' move questions singular performances of work through modes of intensification. Third it develops from strands of feminist thought an intimate geography of digital work. The emergent properties of digital working create space through the intimacies of postwork places where bodies and machines feel the possibilities of being 'at' work.

II Geographies of Digital Work

The 'saturation' of space with forms of software, computational systems and devices is increasingly well documented by geographers (see Kinsley 2014). Economic questions are examined in this scholarship, for example the value of geo-locational data; the productivity of 'smart cities' and the provision of digital infrastructure (e.g. Graham *et al* 2012; Kitchin 2014b). However, the embodied processes by which such digital economies take place receive less investigation. People, and how they live and make a living with and through these technologies, deserve greater attention. This section puts forward the geographies of work as one solution to this problem of the 'relatively few empirical examinations of contemporary digital geographies' (Kinsley 2014: 368). I outline first how digital technologies extend work beyond 'firm' workplace, and second how this results in intensified worker practices to realise working location. I show that such working extensions and intensifications through digital technologies are ambivalent: work can be both a form of self-exploitation and self-fulfilment. These emergent - and thus uncertain - spatial experiences of work through digital technology deserve attention because they are *normal* not exceptional, as noted by those challenging the novelty of labour precarity (Neilson and Rossiter 2008) or the 'cybertariat' (Huws 2003). The stability of the 'standard

employment relationship' that reduces acts of making work into the institutions of finding a job have been forms of economic security extended to a 'relatively privileged group of disproportionately White, male workers in the global North' (De Peuter 2011: 419). Understanding how digital technologies both produce and mitigate such 'precarious' working geographies by folding in life 'beyond' work, is therefore vital for approaching economic futures.

1 Extending work

Digital technologies enable work to extend - to take place beyond - firm or formal workplaces. In the following I draw out three modes of digital work extension (that are not exhaustive): intermediation, co-creation and multi-location work. First digital technologies extend the possibilities of 'outsourcing' work through mediating labour markets. This occurs through the parcelling up and apportioning of 'jobs' through digital platforms. These platforms expand on the role of 'labour market intermediaries' in shaping both the supply of workers and the legal conditions of employment within 'sub-contracted capitalism' (Wills 2009; Coe and Jordhus-Lier 2011; Coe 2013). Crowdsourcing labour platforms, of which Amazon's Mechanical Turk is paradigmatic, enable companies to obtain labour to undertake 'tasks that could alternatively be performed internally by employees' (Bergvall-Kareborn and Howcroft 2014: 214). Such leveraging of the crowd can both build on forms of outsourcing, where companies externalise (menial) 'human intelligence tasks' (Mullings 1999; James and Vira 2010), but also depart from them where platforms operate peer-to-peer (e.g. the platform TaskRabbit) such that client and service-provider are (theoretically) interchangeable (Bauer and Gegenhuber 2015). These forms of distributed production heightened by digital technologies constitute the 'openness paradigm' (Ettlinger 2014: 100) in which a 'new tier in the division of labour facilitated by new communications networks' entails 'unregulated freelance work'.

Second digital technologies extend work through opening up possibilities for forms of 'co-creation'. Rather than work taking place 'in-house', 'value' is created in partnership between producers and consumers, further blurring any distinction between them. This has been long noted in forms of creative media activity (Banks and Deuze 2009; Roig *et al* 2014) where terms such as 'free labour', 'fan labour' and the 'audience commodity' (Manzerolle 2010; Terranova 2000; Scholz 2013) have been evoked to indicate how 'time spent on Facebook and other corporate platforms is not simply consumption or leisure time, but productive time that generates economic value' (Fuchs 2014: 98). In addition to

digital content production, co-creation might also include activities like online (garment) customisation, internet shopping, and self-service check-outs, which mean that consumers might be understood as workers, or as 'working customers' (Cova and Dallı 2009; Gabriel *et al* 2015). Third digital technologies enable forms of 'multi-location' work that takes place beyond the 'workplace'. This builds on the growth in teleworking and the home office (Avery and Baker 2002; Greenhill and Wilson 2006; Johnson *et al* 2007; Steward 2000; Vartiainen and Hyrkkänen 2010; Vilhelmsson and Thulin 2001). The possibilities for networked connection mean 'white-collar' workplaces are interstitial, producing 'plural workscapes' (Felstead *et al* 2005) that might affect how work is done. Sites such as airports, hotel lobbies and cafes exhibit different 'task-space relationships'; in which the character of the space and feature of the work task interact. 'Mobile' and 'global' work (Cohen 2010; Jones 2008) illustrate how mobilities can produce highly localised experiences of space (Cresswell 2011; Hannam *et al* 2006; Laurier 2004) in which workers deploy 'micro-practices' to allow them 'to adapt the spaces [...] to their particular work needs and in doing so create a temporary workspace' (Hislop and Axtell 2009: 72). Taken together, these extensions of work beyond 'firm' location result in greater intensities of activity so that 'space' can be transformed into a 'workplace', examined below.

2 Intensifying Work

This section considers the intensifications of work, showing how they can be understood both quantitatively and qualitatively, before emphasising the ambivalence of emergent working practices wrought by digital technologies. Without static location, a greater quantity of tasks are required so that space can be 'fixed' for work. For example, such intensification might involve the considerable effort invested by 'multi-location workers' to produce a temporary workplace (Hislop and Axtell 2009), including the management of spatio-temporal arrangements through the 'perpetual coordination' (Larsen *et al* 2008) of interactions with colleagues and clients enabled by digital technologies. Work-life balance policies might be framed as a response to such long running problems of 'overflow' and intensification of work (Jarvis and Pratt 2006), that are exaggerated by the logic of continuous connectivity of handheld mobile technologies (Wilson 2014). These policies have aimed to validate paid work in combination with other activities, including leisure. However, Perrons *et al* (2006: 75) claim 'life' activities are more often constituted by forms of care work, such that balance leads 'to long overall working days rather than the implied harmonious equilibrium'. This problem of 'balance' is further entrenched through digital technologies, where intensification occurs not only through calculable dimensions but

through the qualities of 'network time' in which the 'unpredictable' and 'volatile [...] temporality of the network [is carried] into almost every aspect of our lives' (Hassan 2003: 236). Such qualities of intensity that allow the office to be 'always on' (Wainwright 2010) produce 'variable geometries of connection' (Crang *et al* 2006) that challenge the possibilities for precise balance meaning that, if any equilibrium is to be found, it is a chance 'teeter on the brink' (Hassan 2003: 239).

The 'network economy and network worker' (*ibid.*) then occur through forms of work intensification that involve not only a greater quantity of tasks to 'delimit' the workplace, but also tasks of a different quality. When the workplace might 'crop up' unaccounted for, (potential) workers must 'start engaging in *interpretive (imaginative)* labour' (Graeber 2015: 101, my emphasis). Rather than 'brought into being by institutionalised frames of action' (*ibid.* p. 99), the workplace is performed by self-organised workers who decide where and when to 'clock off', and also therefore by imagining what might (not) constitute 'working activity'. Such a relationship between worker independence and 'mental labours' (Ross 2000) of conjuring working possibilities beyond institutional architectures has long been associated with forms of artistic work. The expansion of these *auteur* practices of the artist to a much wider section of the workforce through 'creative work' means:

'people increasingly have to become their own micro-structures, they have to do the work of the structures by themselves, which in turn requires intensive practices of self-monitoring or 'reflexivity' (McRobbie 2002: 518).

So the self-organisation of work enabled by digital technologies extends the intensive artistic work of sustaining (and promoting) self alongside one's art. Digital technologies deepen the importance of 'netWORKing' (Nardi *et al* 2002), and 'professional cool', in the 'foundationless suspense' and 'perpetual anxiety' of work in the 'knowledge' and 'creative' economies (Liu 2004: 19). Such 'networking is an additional form of labour that is required to demonstrate ongoing employability' (Gregg 2011: 11), when permanent employment is unlikely or undesirable. This performance of 'cool' amidst insecurities is enhanced by online social networking (such as Facebook and LinkedIn), 'virtualising' the possibilities for entrepreneurial promotion of the self (Flisfeder 2015; Gregg 2009).

These emergent properties of digital work are ambivalent. The extension of work beyond the formal/institutionalised workplace requires greater intensities of work that might be both affirming and negating. The possibilities for worker freedoms through digital technologies simultaneously require greater attachments to work to secure working

conditions of possibility; uncertainties that emerge through the contradictions of 'self-exploitation in response to the gift of autonomy, and dispensability in exchange for flexibility' (Ross 2008: 34). Thus in the forms of co-creative digital work outlined above, a 'Marxist' framing of the exploitative extraction of surplus value through such 'free labour', can also be read with notions of 'affective consumer labour', and the potential affirmation and enjoyment derived by engaging in such activities (Beverungen *et al* 2015; Jarrett 2016). Equally, the drive to balance or limit working hours through work-life balance policies sits alongside the possibility that the 'work world offers a range of consolations when one's private life may demand more effort and less reward than [...] paid pursuits' (Gregg 2011: 5). So the creative, affirming possibilities of (self-organised) work through digital technologies that might 'make-over the world of work into something closer to a life of enthusiasm and enjoyment' (McRobbie 2002: 521), simultaneously result in working conditions that are 'less just and equal in [...] provision of guarantees' (Ross 2008: 35). This section has outlined a geography of the digital economy through a focus on the ambivalent extensions and intensifications of work. A critical vocabulary for approaching these emergent properties of work, in which theories for changing work might occur through working practices, is traced in feminist geographies below.

III Feminist Geographies of Work

Feminist critique has used the extensions and intensifications of work to outline a politics of the emergent properties of working activity by emphasising their ambivalence.

Recognising the diversity of feminisms, I draw on the ways such thought and practice has involved a complex politics of demanding in which claims for inclusion within the category of 'work' have the potential to both affirm and negate working activity. Feminist politics has highlighted extensions of work to claim recognition within existing modes of value (namely 'capitalist waged labour'), but also has shown how the intensities of working activity demand alternative understandings beyond the wage relation. Regarding the digital extensions and intensifications outlined above then, a key question explored in feminist thought concerns where and when work that is not recognised as such becomes a space for affirmation or negation. This holds in tension the possibilities and limits of a politics of recognition when work is emergent. Therefore, whilst drawing on feminist traditions within (economic) geography (e.g. Gibson-Graham 1996; 2006; McDowell 1991; 1997; 2015; Rose 1993; 1997; Pollard 2013), the aim is not 'to reduce feminism down to the identity politics of gender' (Wright 2010: 60). As should already be apparent, feminist thought might take the situated and embodied struggles of 'Women's work' as a starting point, but

the orientation of these struggles does not necessarily follow any singularly 'gendered' figure. To illustrate this, I outline two critical 'moves' of feminist politics that are useful for understanding the emergent properties of work. Neither move is intended to speak for the diversity of feminist projects, nor is each without intersections with other forms of politics, as will be indicated. The aim in using these broad brush strokes is to signal some of the direction of action opened by feminist thought for approaching work.

1 The Anti-Essentialist Move

The anti-essentialist move is one that questions unitary, coherent identity. McDowell (1993: 157) demonstrates this feminist approach in the aim 'to challenge the very nature and construction of that body of knowledge that is designated academic geography'. For some feminists interested in economy, this has meant questioning both the essence of the category of work, as well as refusing 'capitalism a planetary identity as the most coherent, powerful force on earth' (Wright 2010: 61). The reading of feminist anti-essentialism presented here foregrounds the ways this move deals with extensions of work beyond waged labour, or 'organised' production. Drawing on an interpretation of Marx, this might be understood as the way capital attempts to exploit 'absolutely', for example by extending the working day, rather than 'relatively', for example through raising the intensity of labour (Witheford 1994: 89). To do this, feminist scholarship has questioned the absolute nature of 'production' as the site of value extraction by 'capital'. Accepting the Marxist critique of production as the grounds for exploitation, feminist thought has challenged the assumption of family or domestic labour as 'non-productive' and therefore not a site of exploitation (Dalla Costa and James 1972). In foregrounding such seemingly non-productive activity, feminists have highlighted the 'relationship between the production of value 'at work' and the social reproduction of labour-power' (Mitchell *et al* 2003: 415; Bakker 2007). Thus through child raising and housework, women's role in the reproduction of labour power is 'a form of exploitation simultaneously distinct from, and complementary to, that of wage labour in production' (Witheford 1994: 98).

One way of questioning any essential understanding of work has been through strategies that 'read for difference' (Gibson-Graham 2008), undermining the dominance of conventional framings of labour. An example of this strategy is the tactic of 'renaming' work, such as through the term 'emotional labour' (Hochschild 1983). Whilst deployed differently, this term has broadly been used to extend what counts as productive activity, with geographers often focusing on the role of emotions in constituting both remunerated

and unremunerated care work (Boyer *et al* 2013; Dyer *et al* 2008; Huang and Yeoh 2007). Such an anti-essentialist politics is ambivalent: it manifests as both a negation and an affirmation of work. On the one hand, the demand is for forms of (women's) 'nonwork' to count as work such that this activity can be understood as (double) exploitation. Work must be recognised for it to be negated; understood as oppressive and therefore a site of struggle. On the other hand, the demand is (for women) to be counted as workers in order to realise agency in political struggle. Work is affirmed as a means through which to enact potentially subversive politics. Therefore, the anti-essentialist move exposes the 'performance' of work as a category with seeming coherence but without essential (affirming or negating) substance. Work is evoked and occurs with some stability, yet simultaneously extends beyond its boundaries, evading absolute categorisation. This raises the question of why, if without essence, such 'performances' of work occur as they do. There is a strange historicity to the act of work that despite its diverse possibilities means that 'the act that one does, the act that one performs, is, in a sense, an act that has been going on before one arrived on the scene' (Butler 2004: 160).

2 The Anti-Normative Move

Through exposing and challenging 'social norms', the anti-normative move can be understood as a response to this historicity to the act of work. This move foregrounds the 'relation of individuals to productive work' (Donzelot 1991: 251) when the 'contemporary blurring of work and nonwork is accepted and understood as normal or even positive' (Mitchell *et al* 2003: 429). The reading of anti-normativity presented here shows how work is intensified (in and beyond the 'workplace') to include all kinds of embodied efforts that might cultivate and be cultivated according to certain standards. This intensification results from the ways these standards, or norms, simultaneously require *and* produce 'work'. Such simultaneous 'production' and 'consumption' occurs because, for Butler (1993), norms are not stable but nonetheless continue to direct work despite the very production (i.e. instability) of their normative nature. In Butler's (1993: 13) words, a norm shapes the (working) subject 'to the extent that it is "cited" as such a norm, but it also derives its power through the citations that it compels'. Thus, in addition to work as an extended relation to organised production, work also becomes an intensive relation to the self through the embodiment and (re)production of norms. The ongoing shaping of the (working) subject occurs through 'work' on the self, such that norms do not 'simply exist [...] 'out there"' but instead are involved in 'how bodies *work* and are *worked* upon' (Ahmed 2004: 145, my emphasis). This normative 'work on the self' as the primary relation of the worker to

productive work, similar to the processes of individuation McRobbie (2002) notes as characteristic of creative work, has been recognised as part of wider intensifications of 'work' in 'life'. Such intensification is not simply a quantitative concentration of 'work' tasks that undermines the possibilities of enjoyable 'social' time, as the political claim underpinning demands for work-life balance might suggest (Burchell 2006).

Intensification is also a qualitative shift in which the conceptual distinction between the two is undone 'making work itself the territory of the social, the privileged space for the satisfaction of social need' (Donzelot 1991: 251). This 'socialised worker' (Negri 1989) is 'socialised' by 'her participation in a far more ramified and expansive system of value creation' in which 'a central element in her work involves *communicative* and *coordinative* tasks' (Witheford 1994: 95). Witheford's reading of Negri's position is symptomatic of the way this intensification of work through embodiment of norms can be understood to take on 'feminine' qualities, typified in the sorts of emotive and connective practices required to balance both caregiving and running the household. In this 'homework economy' outside 'the home':

"Work is being redefined as both literally female and feminised, whether performed by men or women. To be feminised means to be made extremely vulnerable; able to be disassembled, reassembled, exploited as a reserve labour force; seen less as workers than servers; subjected to time arrangements on and off the paid job." (Haraway 1991: 166)

Thus, whilst not necessarily undertaken by women, the intensification of work as the territory of the social normatively constructs work as feminine (and therefore to some degree disempowered, in this extract from Haraway). The 'microstructures' and forms of 'self-exploitation' (McRobbie 2002) that constitute the normative 'work on the self' required to be a 'socialised worker' are continuations of forms of 'Women's work'. Therefore, in considering how norms construct the relationship between working subjects and work, the anti-normative move illustrates the challenges to feminist demands for recognition of and through work. First, as with the anti-essentialist move, the anti-normative move illustrates work's ambivalence: its paradoxical negations and affirmations. Work is shown to be normative, negatively constraining working bodies through forms of self-management that might be oppressive.

Yet the anti-normative moves also illustrates the instability of normative *work on bodies* and therefore the affirmative possibility for shaping *bodies at work* beyond these

constraints. This posits 'work' as an activity in which women 'participate in their own representation of themselves while simultaneously rejecting the representation of themselves as exemplars of Woman' (Wright 1997: 278). Second, in thus focusing on work's emergent intensities, the anti-normative move emphasises a politics of the *qualities* rather than *quantities* of work. Instead of 'counting in' and 'adding on' (Cameron and Gibson-Graham 2003) working activities so that they can be recognised as such, the focus is on how work is internally differentiated: it is undertaken through diverse styles and performances that evade absolute categorisation and recognition. So if work is 'a kind of imitation for which there is no original' (Butler 1991: 21), the feminist politics lies in dismissing any 'original' essence of work that could be empowered through recognition, but also in showing how such appearance of internal essence continues to be differentially produced. Thus this post-structuralist move to challenge any 'quest for completeness' in work (Cameron and Gibson-Graham 2003: 152) might be taken up as a negation (i.e. normative constraints) or an affirmation (i.e. alternative scripting) of working experience. This is the distinction between the negations of the subject that can be identified in Butler's reading of Derrida's *différance*, and the affirmations of the subject to be found in Gibson-Graham's (2008: 614) transformative politics that might 'bring new worlds into being.' To conclude this section examining how feminist geographies have approached the emergent properties of work, I emphasise the significance of focusing on the qualities of work. The emergence of the digital workplace means that what counts within the category of 'work' is open, necessitating a politics located in knowledge of the digital workplace as it unfolds, understood through the geographies of intimacy as I argue next.

IV Intimacies of Digital Work

I have outlined the emergent properties of digital work, and how feminist critique operates through a politics of work's emergence: its extensions and intensifications. This section combines these threads to consider how feminist thought can approach the emergence of work through digital technologies. I foreground feminist theorisations of intimacy as a critical lens for the geographies of digital work. Feminist approaches to intimacy emphasise its ambivalent potential to be both affirming and negating. Thus knowing working space through intimacy means paying close attention to what it feels like to be 'at' work amidst the emergent properties of the digital workplace. First intimacy is situated within a wider sense of ambivalence towards work in contemporary feminist thought. In part this stems from the contradictions of a politics of recognition, where the promise of working 'equality' for women either fails to be realised or proves insufficient when faced

with the excesses of life beyond straightforward gendered work identities. Instead of trying to balance 'the work ethic' and 'family values', I illustrate how Weeks' (2011) 'postwork imaginary' builds on the anti-essentialist move to propose a politics suited to the extensive properties of digital work. Second I indicate how feminist understandings of 'sexual difference', rather than categories of gendered identity, build on the anti-normative move to respond to these ambivalences of recognition through work. In emphasising the unstable 'matter' of embodiment, such 'sexual difference theories' (e.g. Grosz 2005) illustrate the complications of categories of maker and made in working relationships with machines, necessitating an understanding of digital work intensity as both quantification and qualification of the self. Third, I outline how such experiences of digital work occur through the spatial sensibilities of intimacy (Berlant 1998). The intimacies of the digital workplace occur through what it feels like to be at work when working space is disruptive and mobile.

1 PostWork Places

"The home, workplace, market, public arena, the body itself - all can be dispersed and interfaced in nearly infinite polymorphous ways, with large consequences for women and others" (Haraway 1991: 163)

To understand how the intimate might become the critical location of digital work requires focusing on work extension beyond the formal 'workplace'. This builds on the anti-essentialist feminist move in which a politics is constructed through the extensions of 'work' as both part of but also separate from 'life'. Here I consider how the 'feminist insistence on expanding the concept of labour beyond its waged form' (Weeks 2011: 122) provides a frame suited to the extensive properties of digital work. This means acknowledging the contradictory possibilities of work as a demand *on* time, but also simultaneously, as a demand *for* time. 'Work time' can itself be demanded as a space for desires, wishes and wants, in what Weeks (2011) terms a 'postwork' imaginary. For all that might is understood as monotonous, routine and binding about work, alternative possibilities exist and can be illuminated through critical scrutiny of present working ideals and realities. This postwork project of critique is an affirmative one that both 'refuses the existing world of work that is given to us and also demands alternatives' (*ibid.* p. 233). This means that demands for and through work can 'be understood as an invocation of the possibility of freedom; [...] as the time and space for invention' (Weeks 2011: 145). Therefore, Weeks' imaginary is one suited to the emergent properties of digital work because - if 'work' occurs anytime and anywhere - the opportunity arises for a (feminist)

politics that cannot be subsumed into the (often competing) discourses of family and work values.

Such a 'postwork' condition extending 'work' beyond the formal 'workplace' can be understood in (at least) two ways in relation to digital technologies. One is to find opportunity in the 'deskilling' and unemployment that some worry will result from digital technologies as the latest wave of 'automation'. Rather than fear job losses, automation becomes the grounds for demands for full unemployment and therefore an apparently 'postwork' condition in the temporal sense. This would be enabled, according to Srnicek and Williams (2015), by some form of Universal Basic Incomeⁱⁱⁱ and perhaps unsurprisingly would not mean no 'work' *per se*, but rather a revaluation of work based on what it involves. Boring and unattractive work would have to be better paid, whereas attractive work that people want to do would need less remuneration. Another 'postwork' expression through digital technologies is perhaps more nuanced. Rather than seeking full unemployment, digital technologies open up possibilities for work time to be more creative. The potential for 'smart machines' to 'increase the intellectual content of work' (Zuboff 1988: 243) enables distributed decision making that goes beyond 'responsible autonomy' (Friedman 1977) of workers within organisations. Instead, work occurs independently through semi-institutionalised attachments to 'entrepreneurial' practices of starting-up (Cockayne 2015) and the broader informalities of 'maker cultures' utilising small scale digital ('additive') manufacturing technologies (Richardson 2016; Rosner and Turner 2015) that have evolving logics of circulation (Birtchnell and Urry 2013a; 2013b). Here, the digital is held to enable a democratisation of desirable creative work, although still by no means universally available.

Thus elements of the 'postwork' imaginary might be far-fetched, but this utopianism is deliberate. For Weeks' feminist politics, the aim is to move beyond the constraints of existing categorisations of working hours to enable people 'to imagine and explore alternatives to the dominant ideals of family form, function and division of labour' (Weeks 2011: 170). This seeks to pick up from forms of feminist utopianism that declined from 1970s and gave way, according to Weeks (p. 184), to a more limited politics of recognition: *"the aspiration to move beyond gender as we know it was supplanted by efforts to secure the recognition and equal treatment of a wider variety of the genders we now inhabit; the project of "smashing the family" and seeking alternatives was largely abandoned in favour*

of achieving a more inclusive version of the still privatised model; postwork militancy was eclipsed by the defence of the equal right to work balanced with family.”

To rectify this, a (feminist) politics of work needs to be *more* not less demanding, redirecting ‘our attention and energies toward an open future’ (p. 206). Utopian demands for work beyond the regularities of the workplace can feed playful improvisation and performance of differently desirable working practices that might turn into wider realities. In such postwork possibilities enabled by digital technologies the distinction between own time and owned time, between the personal and the professional, is necessarily blurred. So, if digital technologies mean work can become a creative, lively practice that extends the ‘workplace’, it is possible to see how this working geography might become an ‘intimate’ one. The postwork imaginary offers a framework for the ambivalence of the extensive properties of digital work that whilst potentially resulting in more ‘work’ time, this might also mean more desirable activity, pointing to the need to examine the differing intensities of such working experiences, taken up below.

2 Bodies and Machines ‘at’ Work

“Ambivalence towards the disrupted unities mediated by high-tech culture requires not sorting consciousness into categories [...] but subtle understanding of emerging pleasures, experiences, and powers with serious potential for changing the rules of the game”

(Haraway 1991: 172-73)

As well as extending the location of ‘work’ into ‘life’, intimate geographies of the digital also intensify individual working experience. This picks up the anti-normative feminist move connecting the ways work is categorised (and ‘represented’) with differently embodied working experiences. In these relationships between work on bodies and bodies at work through digital technologies, the category of ‘Women’s work’ holds an ambivalent position. Technological advancements erase divisions between male and female work, as hypothesised by Marx and Engels (1967: 88):

“the more modern industry becomes developed, the more is the labour of men superseded by that of women. Differences of age and sex have no longer any distinctive validity for the working class.”

Equally though, by opening possibilities for the self-organisation of work, digital technologies encourage flexible, relational practices; negotiations and compromises that are forms of ‘soft mastery’ (Turkle 1997: 56) often associated with normative working styles of women. Turkle (*ibid.*) argued that whilst such ‘soft’ skills with and through technologies are not unique to either gender, they are nonetheless styles ‘to which many

women are drawn'. Given these ambivalences of the category of 'Women's work' in relation to digital technologies, I suggest that experiences of digital work might be understood through the intensities of 'sexual difference'. Rather than framing the experience of work as *a priori* 'male' or 'female', foregrounding notions of 'sexual difference' means focusing on how working processes are indeterminate, exploratory, often transforming senses of gendered (and/or working) identities. In this understanding, gender identity is an effect not a cause of working experiences, similar to Butler's model of performativity.

However, in contrast to Butler's theorisation of the production of gender, sexual difference theories emphasise the biological and/or nonhuman constitution of 'matter', characteristic of what has been termed 'new materialist' feminism (see Barad 2003; Colls 2012; Hird 2009; Fannin *et al* 2014; Jagger 2015; Kirby and Wilson 2011). Broadly, the contention is that Butler's account of materiality overemphasises 'culture/discourse' and therefore does not upset gender enough; it does not focus on the (biological) instability of 'matter/bodies'^{iv}. Instead, through emphasising the changing materiality of bodies^v, sexual difference unsettles the boundaries between the human and nonhuman, organism and machine, in ways that are useful for conceptualising the experience of digital work. By foregrounding the role of technology in working experiences, digital work magnifies how the worker is both creator and created through relationships with machines. In forms of 'artistic' work such as music-making and photography, (digital) technology might be held to function in a mimetic capacity, operating as a 'mirror' of the observing subject in the World. In less 'creative' work, (digital) technologies objectify the worker, often through processes of observation and quantification now heightened through 'wearables' and other self-tracking devices (Moore and Robinson 2015). So in these human-nonhuman relations, the difference between the maker and the made becomes uncertain, meaning that 'what people are experiencing is not transparently clear' (Haraway 1991: 173). As well as potential tools of control, the 'enchanted' and 'romantic automatism' (Sussman 1999; Turner 2008) of working technologies result in 'close, sensuous and relational' (Turtle 1997: 62) engagements with the worker. Thus, digital work necessitates careful attention to the co-constitutive experiences of worker with technology, complicating 'simple models of subject and object' (Crang 1997: 366).

In focusing on processes that exceed categorisation, sexual difference emphasises a qualitative approach to the intensities of work experience, holding open working subjectivity through these worker-technology relations. Grosz (2005: 160) argues that: *‘sexual difference is not a measurable difference between two given, discernible, different things - men and women, for example - but an incalculable process, not something produced but something in the process of production.’*

The provisional nature of the sexed and/or working body that appears in this account requires understandings of the ‘intensity’ working space that combine the objective and the subjective, appropriate for digital technologies. As well as being *intensive* - comprising dense spatio-temporal concentrations of tasks - digital work is also *intense* - comprising degrees of directed attention through and towards tasks. Digital working space is objectively intensive through high volumes of jobs and subjectively intense through the variegated experiences of their undertaking. This has implications for how ‘quantification’ in digital work is understood. Whilst there may be a proliferation of (wearable) tools that can package, monitor and direct forms of embodied skill often through seemingly relentless ‘notifications’, such work also retains elements of the ‘unpredictable and unforeseeable’ (Grosz 2005: 189). As Swan (2013) argues, the ‘quantified self’ is also qualitative, combining objective data metrics with the subjective experiences of the impact of this data. Such quantifications are entwined with qualifications of the self as workers sense and interpret their environment differently, making adjustments to their incorporation of working tasks. So by creating more tasks that are further proliferated through the variations in how they take place, accounts of digital work intensities must retain the qualitative ‘exploration of difference’ (Grosz 2005: 190) in interaction with processes of quantification. I now turn to the spatial senses of intimacy through which these working experiences unfolds.

3 Feeling Working Space

“There is no drive in cyborgs to produce total theory, but there is an intimate experience of boundaries, their construction and deconstruction” (Haraway 1991: 181)

As both personal and professional, private and public, these intimacies of being ‘at’ work with digital technologies require an approach to ‘collectively building effective theories’ of space that emphasises ‘what it means to be embodied in high-tech worlds’ (Haraway 1991: 173). I outline here how these intimate geographies of the digital occur through what it feels like to be at work. Digital technologies exaggerate the potential inconsistencies between being ‘at’ work and ‘doing’ work, meaning working space is constituted by

combinations of 'objective' fixed working location and the 'subjective' senses of work taking place. To label this 'workspace' intimate is to emphasise the ambivalent feelings of proximity and distance, connection and disconnection, that constitute experiences of working with and through digital technologies. Gregg (2011: 1) discusses such uncertainties of 'work's intimacies' through her notion of 'presence bleed' in which digital technologies challenge conventions of availability when 'firm boundaries between personal and professional identities no longer apply'. In such digital work she shows how there are:

"opportunities for connection, community and solidarity, generating relationships that complicate what we mean by the notion of friendship. At the same time however, technology has played on feelings of instability, threat and fear among workers facing an unstable employment landscape and the death of the linear career path." (p.8)

Here, the intimate appears as both a location beyond the formal workplace and a style of working experience in connection with technology. The 'intimate' is a more or less fixed spatial *object*, a sphere in which personal roles are negotiated and reconfigured. Equally, 'intimacy' constitutes *subjective* processes of work taking place through the forming of attachments beyond the self, including with/through technologies.

Geographies of intimacy^{vi} might then trace the parameters and follow the movements of this 'subject object' (Suchman 2011), this disruptive and mobile working space, to understand the ambivalences of digital work. Thinking through this, a first step takes the disruptions of the intimate sphere to consider how digital working space is not a bounded, contained location. Feminist approaches to the 'intimate sphere' highlight its constitution through forms external penetration that challenge senses of proximity as quantifiably nearby. The closeness of intimacy can be packed with explosive feelings of, and 'unbearable' compulsions to, distance (Berlant and Edelman 2014). Thus occupying and being occupied 'in' the intimate sphere occurs through complex senses of shared working space through digital technologies that might involve, for example, experiences of regulation and exploitation. As a biopolitical project (Oswin and Olund 2010), the intimate sphere is governed to shape the working subject, such as through the wearable technologies mentioned above that seek to optimise embodied performances of tasks in and beyond the 'workplace'. As a commercial project (Boris and Parreñas 2010), the intimate sphere is exploited, undermining the authentic (working) subject, for example through the performances of domesticity and hospitality required by AirBnB hosts (Molz 2012). In these cases, working space is felt through disruption of the boundaries of the intimate sphere through digital technologies.

A second step examines the movements of intimacy to understand how working space (re)configures feelings of continuous connection to and through digital work. Connecting with work - understood as knowledge of working activity built through 'close' association and repeat 'encounter' - takes on a mobility through the emergent properties of digital work. The attachments to and encounters with work through digital technologies constitute working connections that travel, mingling with practices that make other places familiar, such as cafes, bedrooms and parks. These mobile connections with work possess an amorphous, spreading presence so that working space has provisional dimensions that evade leading 'to a stabilising something, something institutional' (Berlant 1998: 287). Thus through these working connections, digital work's intimacy has relational coordinates that resist a static geometry, meaning that working space shapes and is shaped by the wider environment. Intimacy fails to take fixed parameters, to solidify, and instead is 'portable, unattached to a concrete space' and is in fact a 'drive that creates spaces around it' (Berlant 1998: 284). This moving and enveloping intimacy with work through digital technologies might be sensed through an 'aesthetic of attachment' but without 'inevitable forms or feelings' (*ibid.* p. 285).

Together then, these disruptive and mobile intimacies of digital working space might be both overwhelming and desirable (Berlant 2016), requiring close attention to what it feels like to be working. Being bound to work through technology is simultaneously an attachment to working freedoms; to the promise that these digital tools will bring working activities and forms of connection that are better for the self beyond work. As well as disrupting boundaries, this intimate geography involves processes of orientation and disorientation (Ahmed 2006), a 'feeling out' (Berlant 2011: 17) of what work might become and what might become work through these extensions and intensifications. Social media operates through such intimate orientations, where personal 'status' and 'feeds' are forms of production and consumption that can simultaneously direct work (e.g. through self-promotion and 'networking') but also send working activity astray (e.g. 'scrolling' as shifting registers of distracted interaction). In such attachments to diffuse updates and notifications through embodied engagements with technologies, intimacies are where work might be shared and where sharing occurs through work. So as well as focusing on disruptive 'spheres' of work/life interaction, these intimate geographies of the digital also highlight mobile quasi-institutional spatial forms, felt for example in co-working spaces^{vii}, that operate as shared 'micro-structures' (McRobbie 2002) sustaining attachments to and

through working futures. Working with and through digital technologies then occurs through the intimacies of work taking place that might produce experiences of fulfilment, exploitation or both simultaneously.

V Conclusion

Feminist critique provides an analytical means to situate work as an empirical focus for digital geographies. Geographers can contribute to debates on the digital economy by examining how working activities take place through and with digital technologies. These technologies extend and intensify work, rendering the boundaries of the workplace emergent. This heightens the ambivalence of work; the possibilities for working experience to be that of affirmation and/or negation. Building on anti-essentialist and anti-normative politics, the utility of feminist thought for approaching such extensions and intensifications of work through digital technologies has been shown through the lens of intimacy. The uncertainties over when and with what implications working space becomes workplace; open connection becomes rule-governed network; requires focusing on what it feels like to be doing work. Knowledge of this intimate geography of the digital combines theory and practice to produce descriptions of the workplace that might themselves become culturally creative acts, to go 'ahead of social practices in order to open a field for them' (De Certeau 1984: 125). I point to three areas for the continuation of this project of knowing and changing the 'digital workplace' through intimacy.

First, 'postwork' places require further examination to understand the relationship between workplace and worker. Whether 'flexible' or 'insecure', digital workplace and worker are engaged in nuanced mimetic relations. The complex adaptive functions of mimicry, producing contrary effects of travesty, camouflage and intimidation (Lacan 1979: 99), demand a focus on what workplace representation for/of the worker might mean with digital technologies. The mobility of the workplace and the mix of differently orientated workers that occupy it undermines existing attempts to regulate and manage the quantities and intensities of work, for example through work-life balance policies. Examining the implications of the extending digital workplace for the worker would contribute to debates concerning the working conditions and worker wellbeing at different ends of the income spectrum. Equally, for those interested in measures of 'productivity' and their investigation, there are likely implications for the quality and quantity of work undertaken through these postwork places.

Second, the prevalence of different combinations of bodies and machines 'at' work through digital technologies necessitates greater understanding of evolving forms of worker embodiment. People engage in a range of intensities of interaction with, supervision over and direction by technologies that might make work appear closer or further away. These ambiguous proximities with work through machines, and the implications of work disappearing at a distance (Suchman 1995), raise questions concerning understandings of skill. If skill is something of the activity of doing work, digital technologies result in bodily elaborations in close connection with machines that might limit or displace past working 'skills', whilst proliferating the informational content of work (Berardi 2009). This shifts understandings of human labour with machines from 'the mechanistically automated to the electronically autonomous' (Stacey and Suchman 2012: 28), perhaps resulting in job losses but also in new styles of working. The question of what constitutes skill in these experiences of proximity through digital work, and how workers train for and improvise through such working environments, is an area ripe for geographical investigation.

Third, the idea and practice of 'feeling working space' opens up further questions concerning politics. The immanent feeling out of digital work provides opportunities for working differently but is also problematic. Employment becomes a nebulous category as 'entrepreneurship' and 'self-employment' expand, and the 'old word unemployment' is no longer recognisable 'in the scene that word named for so long' (Derrida 1994: 101). Digital technologies might therefore exaggerate the discrepancies between what it feels like to be at work and the distribution of income in society. Greater understanding of the emergent properties of the 'digital workplace' therefore seems vital for those seeking a politics that challenges contemporary and future relationships between work and income.

ⁱ The differing practices that might constitute 'digital work' are highly uneven globally, however it is not within the scope of this article to examine these.

ⁱⁱ My emphasis is on 'feminism' as a form of political thought extending beyond but arising from (and in turn shaping) experiences of 'Women'. This illustrates that what counts as 'femininity', and thus 'Women's work', is open to debate. Nonetheless there is fantastically valuable scholarship by geographers highlighting the continued inequalities, for example in pay, for 'Women' in the workplace (e.g. Larner 1991; Molloy and Larner 2010; Cox 1997; 2007; Reimer 2016; Epstein and Kalleberg 2004).

ⁱⁱⁱ Other terms are used, but the principal is that work does not form the main mechanism for distribution of income in society. For example see Hardt and Negri's (2009: 380) call for a 'basic income sufficient for the necessities of a productive dignified existence' and Ferguson's (2015) discussion of a politics of distribution (as opposed to production) in relation to social welfare programmes in southern Africa.

^{iv} For an insight into these debates see Ahmed's (2008) discussion of 'new materialist' claims that feminism is 'anti-biology'. She argues (in an unapologetically provocative manner) that the 'new materialist' scholarship risks turning 'matter' into a 'fetish object'. Instead she suggests that there is

a need to at least partially let go of these theoretical 'objects' to find out what happens when (theoretical) things fall apart, given that what counts as biology and materiality within the sciences is itself disputed.

^v Noting that there are significant philosophical disparities between the 'materialisms' under the banner of this 'new' feminist scholarship, e.g. see Hein's (2016) discussion of immanence in Deleuze (as taken up in Grosz's vitalist approach) set against the transcendence of Barad's performativity of matter.

^{vi} These complexities of intimacy have been of interest to geographers looking to connect the encounters through which embodied experiences of race, sexuality and so on are played out singularly, yet connect with broader societal 'aggregations' and inequalities cut along such 'cultural' lines (e.g. Nayak 2011; Saldanha 2010; Valentine 2008). This 'intimate turn' involves a complex 'politics of proximities' that highlights 'potential shifts in the boundaries of what counts as political subject matter' (Price 2013: 578), including through a reorientation of the geopolitical (Pain 2015).

^{vii} For London examples of these are spaces see the GLA's 2014 report 'Supporting places of work: incubators, accelerators and co-working spaces.'

References

- Ahmed S (2004) *The Cultural Politics of Emotion*. Edinburgh: Edinburgh University Press.
- Ahmed S (2006) *Queer phenomenology: orientations, objects, others*. Durham: Duke University Press.
- Ahmed S (2008) Open forum imaginary prohibitions: some preliminary remarks on the founding gestures of the 'New Materialism'. *European Journal of Women's Studies* 15: 23-39.
- Ash J (2013) Rethinking affective atmospheres: Technology, perturbation and space times of the non-human. *Geoforum* 49: 20–28.
- Avery G and Baker E (2002) Reframing the infomated household-workplace. *Information and Organization* 12: 109–134.
- Bakker I (2007) Social Reproduction and the Constitution of a Gendered Political Economy. *New Political Economy* 12: 541–556.
- Banks J and Deuze M (2009) Co-creative labour. *International Journal of Cultural Studies* 12: 419–431.
- Barad K (2003) Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter. *Signs* 28: 801-831.
- Bauer R M and Gegenhuber T (2015) Crowdsourcing: Global search and the twisted roles of consumers and producers. *Organization* 22, 661–681.
- Beck U (2000) *The brave new world of work*. Cambridge: Polity Press.
- Berardi F (2009) *The soul at work: from alienation to autonomy*. LA: Semiotext(e).
- Bergvall-Kareborn B and Howcroft D (2014) Amazon mechanical turk and the commodification of labour. *New Technology, Work and Employment* 29: 213–223.
- Berlant L (1998) Intimacy: A Special Issue. *Critical Inquiry* 24: 281–288.
- Berlant L (2011) *Cruel optimism*. Durham: Duke University Press.
- Berlant L (2016) The commons: Infrastructures for troubling times. *Environment and Planning D: Society and Space* 34: 393-419.
- Berlant L and Edelman L (2014) *Sex, or the unbearable*. Durham: Duke University Press.
- Beverungen A, Bohm S and Land C (2015) Free Labour, Social Media, Management: Challenging Marxist Organization Studies. *Organization Studies* 36: 473–489.
- Birtchnell T and Urry J (2013a) 3D, SF and the future. *Futures* 50, 25–34.
- Birtchnell T and Urry J (2013b) Fabricating Futures and the Movement of Objects. *Mobilities* 8, 388–405.
- Boris E and Parreñas R (Eds.) (2010) *Intimate labors: cultures, technologies, and the politics of care*. Stanford: Stanford University Press.

- Boyer K, Reimer S and Irvine L (2013) The nursery workspace, emotional labour and contested understandings of commoditised childcare in the contemporary UK. *Social & Cultural Geography* 14: 517–540.
- Burchell B (2006) Work intensification in the UK, in Perrons D, Fagan C, McDowell L, Ray K and Ward K (Eds.) *Gender divisions and working time in the new economy: changing patterns of work, care and public policy in Europe and North America, Globalization and welfare*. Northampton, Mass: E. Elgar: 21-34.
- Butler J (1991) Imitation and gender subordination. In Fuss D (Ed.) *Inside/out: lesbian theories, gay theories*. New York: Routledge: 13-30.
- Butler J (1993) *Bodies that matter*. London: Routledge.
- Butler J (2004) Performative acts and gender constitution: an essay in phenomenology and feminist theory. In Bial H (ed.) *The Performance Studies Reader*. London: Routledge.
- Cameron J and Gibson-Graham J K (2003) Feminising the Economy: Metaphors, strategies, politics. *Gender, Place & Culture* 10: 145–157.
- Cockayne D (2015) Entrepreneurial affect: Attachment to work practice in San Francisco's digital media sector. *Environment and Planning D: Society and Space*.
- Coe N M (2013) Geographies of production III: Making space for labour. *Progress in Human Geography* 37: 271–284.
- Coe N M and Jordhus-Lier D (2011) Constrained agency? Re-evaluating the geographies of labour. *Progress in Human Geography* 35: 211–233.
- Cohen R (2010) Rethinking “mobile work”: boundaries of space, time and social relation in the working lives of mobile hairstylists. *Work, Employment & Society* 24: 65–84.
- Colls R (2012) Feminism, bodily difference and non-representational geographies: Feminism, bodily difference and non-representational geographies. *Transactions of the Institute of British Geographers* 37: 430–445.
- Cova B and Dalli D (2009) Working consumers: the next step in marketing theory? *Marketing Theory* 9: 315–339.
- Cox R (1997) Invisible labour: Perceptions of paid domestic work in London. *Journal of Occupational Science* 4: 62–67.
- Cox R (2007) The Au Pair Body: Sex Object, Sister or Student? *European Journal of Women's Studies* 14: 281–296.
- Crang M (1997) Picturing practices: research through the tourist gaze. *Progress in Human Geography* 21: 359-373.
- Crang M, Crosbie T and Graham S (2006) Variable Geometries of Connection: Urban Digital Divides and the Uses of Information Technology. *Urban Studies* 43: 2551–2570.

- Cresswell T (2011) Mobilities I: Catching up. *Progress in Human Geography* 35: 550–558.
- Dalla Costa M and James S (Eds.) (1972) *The Power of women and the subversion of the community*. Bristol: Falling Wall Press.
- De Certeau M (1984) *The Practice of Everyday Life*. University of California Press, Berkley.
- Del Casino V J (2015) Social geographies II: Robots. *Progress in Human Geography*.
- De Peuter G (2011) Creative Economy and Labor Precarity: A Contested Convergence. *Journal of Communication Inquiry* 35: 417–425.
- Derrida J (1994) *Spectres of Marx*. Routledge, London.
- Donzelot J (1991) Pleasure in work, in Burchell G, Gordon C and Miller, P (eds.) *The Foucault Effect*. University of Chicago Press, Chicago, pp. 251–280.
- Dyer S, McDowell L and Batnitzky A (2008) Emotional labour/body work: The caring labours of migrants in the UK's National Health Service. *Geoforum* 39: 2030–2038.
- Elwood S and Leszczynski A (2011) Privacy, reconsidered: New representations, data practices, and the geoweb. *Geoforum* 42: 6–15.
- Epstein C and Kalleberg A (2004) *Fighting for time: shifting boundaries of work and social life*. New York: Russell Sage Foundation.
- Ettlinger N (2014) The Openness Paradigm. *New Left Review* 89: 89–100.
- Fannin M MacLeavy J Larner W Wang W Work, life, bodies: New materialisms and feminisms. *Feminist Theory* 15: 261–268.
- Felstead A, Jewson N and Walters S (2005) *Changing places of work*. Basingstoke: Palgrave Macmillan.
- Ferguson J (2015) *Give a man a fish: reflections on the new politics of distribution*. Durham: Duke University Press.
- Flisfeder M (2015) The Entrepreneurial Subject and the Objectivization of the Self in Social Media. *South Atlantic Quarterly* 114: 553–570.
- Friedman A (1977) *Industry and labour*. Basingstoke: MacMillan.
- Fuchs C (2014) Digital prosumption labour on social media in the context of the capitalist regime of time. *Time & Society* 23: 97–123.
- Gabriel Y, Korczynski M and Rieder K (2015) Organizations and their consumers: Bridging work and consumption. *Organization* 22: 629–643.
- Gibson-Graham J K (1996) *The end of capitalism (as we knew it): a feminist critique of political economy*. Minneapolis: University of Minnesota Press.
- Gibson-Graham J K (2006) *A postcapitalist politics*. Minneapolis: University of Minnesota Press.

- Gibson-Graham J K (2008) Diverse economies: performative practices for 'other worlds'. *Progress in Human Geography* 32: 613–632.
- GLA (2014) Supporting places of work: incubators, accelerators and co-working spaces. GLA, Available at: https://www.london.gov.uk/sites/default/files/180%20IAC%20Report.Artwork_web.pdf
- Graeber D (2015) *The utopia of rules: on technology, stupidity, and the secret joys of bureaucracy*. London: Melville House.
- Graham M (2011) Time machines and virtual portals: The spatialities of the digital divide. *Progress in Development Studies* 11: 211–227.
- Graham M, Hale S and Stephens M (2012) Featured graphic: Digital divide: the geography of Internet access. *Environment and Planning A* 44: 1009–1010.
- Greenhill A and Wilson M (2006) Haven or hell? Telework, flexibility and family in the e-society: a Marxist analysis. *European Journal of Information Systems* 15: 379–388.
- Gregg M (2009) Banal Bohemia: Blogging from the Ivory Tower Hot-Desk. *Convergence: The International Journal of Research into New Media Technologies* 15, 470–483.
- Gregg M (2011) *Work's Intimacy*. Polity, Cambridge.
- Grosz E (2005) *Time travels: feminism, nature, power*. Durham: Duke University Press.
- Hannam K, Sheller M and Urry J (2006) Editorial: Mobilities, Immobilities and Moorings. *Mobilities* 1: 1–22.
- Haraway D (1991) *Simians, Cyborgs and Women: the Reinvention of Nature*. Free Association Books.
- Hardt M (1999) Affective Labor. *Boundary 2* 26: 89–100.
- Hardt M and Negri A (2009) *Commonwealth*. Cambridge MA: Belknap.
- Hassan R (2003) Network Time and the New Knowledge Epoch. *Time & Society* 12: 225–241.
- Hein S (2016) The New Materialism in qualitative inquiry: how compatible are the philosophies of Barad and Deleuze? *Cultural Studies Critical Methodologies* 16: 132–140.
- Hird M (2009) Feminist engagements with matter. *Feminist Studies* 35: 329–346.
- Hislop D and Axtell C (2009) To infinity and beyond?: workspace and the multi-location worker. *New Technology, Work and Employment* 24: 60–75.
- Hochschild A (1983) *The Managed Heart: the Commercialisation of Human Feeling*. Berkley: University of California Press.
- Huang S and Yeoh B (2007) Emotional Labour and Transnational Domestic Work: The Moving Geographies of "Maid Abuse" in Singapore. *Mobilities* 2: 195–217.

- Huws U. (2003) *The making of a cybertariat: virtual work in a real world*. New York: Monthly Review Press.
- Jagger G (2015) The New Materialism and Sexual Difference. *Signs* 40: 321-342.
- James A and Vira B (2010) "Unionising" the new spaces of the new economy? Alternative labour organising in India's IT Enabled Services–Business Process Outsourcing industry. *Geoforum* 41: 364–376.
- Jarrett K (2016) *Feminism, labour and digital media: the digital housewife*. London: Routledge.
- Jarvis H and Pratt A (2006) Bringing it all back home: The extensification and "overflowing" of work. *Geoforum* 37: 331–339.
- Johnson L, Andrey J and Shaw S (2007) Mr. Dithers Comes to Dinner: Telework and the merging of women's work and home domains in Canada. *Gender, Place & Culture* 14: 141–161.
- Jones A (2008) The rise of global work. *Transactions of the Institute of British Geographers* 33: 12–26.
- Kinsley S (2014) The matter of "virtual" geographies. *Progress in Human Geography* 38: 364–384.
- Kirby V and Wilson E (2011) Feminist conversations with Vicki Kirby and Elizabeth A. Wilson. *Feminist Theory* 12: 227-234.
- Kirsch S (2014) Cultural geography II: Cultures of nature (and technology). *Progress in Human Geography* 38: 691–702.
- Kitchin R (2013) Big data and human geography: Opportunities, challenges and risks. *Dialogues in Human Geography* 3: 262–267.
- Kitchin R (2014a) Big Data, new epistemologies and paradigm shifts. *Big Data & Society* 1.
- Kitchin R (2014b) The real-time city? Big data and smart urbanism. *GeoJournal* 79: 1–14.
- Kitchin R and Dodge M (2011) *Code/space: software and everyday life*. Boston, Mass.: MIT Press.
- Kleine D (2013) *Technologies of Choice? ICTs, Development, and the Capabilities Approach*. Boston, Mass.:MIT Press.
- Kwan M-P (2002) Feminist Visualization: Re-envisioning GIS as a Method in Feminist Geographic Research. *Annals of the Association of American Geographers* 92: 645–661.
- Kwan M-P (2007) Affecting Geospatial Technologies: Toward a Feminist Politics of Emotion. *The Professional Geographer* 59: 22–34.
- Lacan J (1979) *The four fundamental concepts of psycho-analysis*. Penguin, London.

- Larner W (1991) Labour Migration and Female Labour: Samoan Women in New Zealand. *Journal of Sociology* 27: 19-33.
- Larsen, J., Urry, J., Axhausen, K., 2008. Coordinating face-to-face meetings in mobile network societies. *Information, Communication & Society* 11: 640–658.
- Laurier E (2004) Doing Office Work on the Motorway. *Theory, Culture & Society* 21: 261–277.
- Leszczynski A (2014) Spatial media/tion. *Progress in Human Geography*.
- Leszczynski A and Elwood S (2015) Feminist geographies of new spatial media: Feminist geographies of new spatial media. *The Canadian Geographer / Le Géographe canadien* 59: 12–28.
- Liu A (2004) *The laws of cool: knowledge work and the culture of information*. Chicago: University of Chicago Press.
- Manzerolle V (2010) Mobilising the audience commodity: digital labour in a wireless world. *Ephemera: theory and politics in organization* 10: 455–469.
- Marx K and Engels F (1967) *The Communist Manifesto*. Trans. Samuel Moore. London: Penguin Books.
- McDowell L (1991) Life without Father and Ford: The New Gender Order of Post-Fordism. *Transactions of the Institute of British Geographers* 16: 400.
- McDowell L (1993) Space, place and gender relations: Part I. Feminist empiricism and the geography of social relations. *Progress in Human Geography* 17: 157–179.
- McDowell L (1997) *Capital culture: gender at work in the city*, Studies in urban and social change. Oxford: Blackwell Publishers.
- McDowell L (2015) Poepke Lecture in Economic Geography-The Lives of Others: Body Work, the Production of Difference, and Labor Geographies. *Economic Geography* 91: 1–23.
- McRobbie A (2002) Clubs to companies: notes on the decline of political culture in speeded up creative worlds. *Cultural Studies* 16: 516–531.
- Mitchell K, Marston S and Katz C (2003) Introduction: Life's Work: An Introduction, Review and Critique. *Antipode* 35: 415–442.
- Molz J (2012) CouchSurfing and network hospitality: 'It's not just about the furniture'. *Hospitality & Society* 1: 215–225.
- Molloy M and Larner W (2010) Who needs cultural intermediaries indeed?: Gendered networks in the designer fashion industry. *Journal of Cultural Economy* 3: 361-377.
- Moore P and Robinson A (2015) The quantified self: what counts in the neoliberal workplace. *New Media and Society* [online first].

- Mullings B (1999) Sides of the Same Coin?: Coping and Resistance among Jamaican Data-Entry Operators. *Annals of the Association of American Geographers* 89: 290–311.
- Nardi B, Whittaker S and Schwarz H (2002) NetWORKers and their Activity in Intensional Networks. *Computer Supported Cooperative Work* 11: 205–242.
- Nayak A (2011) Geography, race and emotions: social and cultural intersections. *Social & Cultural Geography* 12: 548–562.
- Negri A (1989) *The Politics of Subversion: a Manifesto for the Twenty First Century*. Cambridge: Polity.
- Neilson B and Rossiter N (2008) Precarity as a political concept, or, Fordism as exception. *Theory, Culture and Society* 25: 51-72.
- Oswin N and Olund E (2010) Governing intimacy. *Environment and Planning D: Society and Space* 28: 60–67.
- Pain R (2015) Intimate war. *Political Geography* 44, 64–73.
- Perrons D, Fagan C, McDowell L, Ray K and Ward K (Eds.) (2006) *Gender divisions and working time in the new economy: changing patterns of work, care and public policy in Europe and North America, Globalization and welfare*. Northampton, Mass: E. Elgar.
- Pollard J (2013) Gendering capital: Financial crisis, financialization and (an agenda for) economic geography. *Progress in Human Geography* 37: 403–423.
- Pratt G (2004) *Working feminism*. Philadelphia: Temple University Press.
- Pratt G (2012) *Families apart: migrant mothers and the conflicts of labor and love*. Minneapolis: University of Minnesota Press.
- Pratt G and Rosner V (Eds.) (2012) *The global and the intimate: feminism in our time*. New York: Columbia University Press.
- Price P L (2013) Race and ethnicity II: Skin and other intimacies. *Progress in Human Geography* 37: 578–586.
- Reimer S (2016) ‘It’s just a very male industry’: gender and work in UK design agencies. *Gender, Place and Culture* 23: 1033-1046.
- Richardson M (2016) Pre-hacked: open design and the democratisation of product development. *New Media and Society* 18: 653-666.
- Roig A, San Cornelio G, Sanchez-Navarro J and Ardevol E (2014) “The fruits of my own labor”: A case study on clashing models of co-creativity in the new media landscape. *International Journal of Cultural Studies* 17: 637–653.
- Rose G (1993) *Feminism and Geography: the Limits of Geographical Knowledge*. Cambridge: Polity.

Rose G (1997) Situating knowledges: positionality, reflexivities and other tactics. *Progress in Human Geography* 21: 305–320.

Rose G (2015) Rethinking the geographies of cultural 'objects' through digital technologies: Interface, network and friction. *Progress in Human Geography*

Rosner D and Turner F (2015) Theaters of Alternative Industry: Hobbyist Repair Collectives and the Legacy of the 1960s American Counterculture, in: Plattner H Meinel C and Leifer L (Eds.) *Design Thinking Research*. Springer International Publishing pp. 59–69.

Ross A (2000) The mental labour problem. *Social Text* 63: 1-31.

Ross A (2008) The New Geography of Work: Power to the Precarious? *Theory, Culture & Society* 25: 31–49.

Saldanha A (2010) Skin, affect, aggregation: Guattarian variations on Fanon. *Environment and Planning A* 42: 2410–2427.

Scholz T (Ed.) (2013) *Digital labor: the Internet as playground and factory*. New York: Routledge.

Sennett R (1998) *The corrosion of character: the personal consequences of work in the new capitalism*. New York: Norton.

Srnicek N and Williams A (2015) *Inventing the future: postcapitalism and a world without work*. Brooklyn: Verso Books.

Stacey J and Suchman L (2012) Animation and Automation - The Liveliness and Labours of Bodies and Machines. *Body and Society* 18: 1-46.

Steward B (2000) Changing Times: The Meaning, Measurement and use of Time in Teleworking. *Time & Society* 9: 57–74.

Suchman L (1995) Making work visible. *Communications of the ACM* 38, 56–ff.

Suchman L (2011) Subject objects. *Feminist Theory* 12, 119–145.

Sussman M (1999) Performing the Intelligent Machine: Deception and Enchantment in the Life of the Automaton Chess Player. *TDR/The Drama Review* 43, 81–96.

Swan M (2013) The Quantified Self: Fundamental Disruption in Big Data Science and Biological Discovery. *Big Data* 1: 85-99.

Terranova T (2000) Free Labour: Producing Culture for the Digital Economy. *Social Text* 2: 33–58.

Turkle S (1997) *Life on the screen: identity in the age of the internet*. New York: Simon & Schuster.

Turner F (2008) Romantic Automatism: Art, Technology, and Collaborative Labor in Cold War America. *Journal of Visual Culture* 7: 5–26.

- Valentine G (2008) Living with difference: reflections on geographies of encounter. *Progress in Human Geography* 32: 323–337.
- Vartiainen M and Hyrkkänen U (2010) Changing requirements and mental workload factors in mobile multi-locational work. *New Technology, Work and Employment* 25: 117–135.
- Vilhelmson B and Thulin E (2001) Is Regular Work at Fixed Places Fading Away? The Development of ICT-Based and Travel-Based Modes of Work in Sweden. *Environment and Planning A* 33: 1015–1029.
- Wainwright E (2010) The office is always on: DEGW, Lefebvre and the wireless city. *The Journal of Architecture* 15: 209–218.
- Weeks K (2011) *The problem with work: feminism, Marxism, antiwork politics, and postwork imaginaries*. Durham: Duke University Press.
- Wills J (2009) Subcontracted employment and its challenge to labor. *Labor Studies Journal* 34: 441–60.
- Wilson A (2016) The Infrastructure of Intimacy. *Signs* 41: 247–280.
- Wilson M (2011) Data matter(s): legitimacy, coding, and qualifications-of-life. *Environment and Planning D: Society and Space* 29: 857–872.
- Wilson M (2012) Location-based services, conspicuous mobility, and the location-aware future. *Geoforum* 43: 1266–1275.
- Wilson M (2014) Continuous connectivity, handheld computers, and mobile spatial knowledge. *Environment and Planning D: Society and Space* 32, 535–555.
- Witthorpe N (1994) Autonomist Marxism and the Information Society. *Capital & Class* 18: 85–125.
- Wright M W (1997) Crossing the factory frontier: gender, place, and power in the Mexican Maquiladora. *Antipode* 29: 278–302.
- Wright M W (2009) Gender and geography: knowledge and activism across the intimately global. *Progress in Human Geography* 33: 379–386.
- Wright M W (2010) Gender and geography II: bridging the gap -- feminist, queer, and the geographical imaginary. *Progress in Human Geography* 34: 56–66.
- Zuboff S (1988) *In the age of the smart machine*. New York: Basic Books.